Listing of the Claims

In the Claims:

1. (Original) A method for scheduling appointments to do a job, comprising the steps of:

(a) enabling an operator to specify each service and a time dependency of each service needed to perform the job;

(b) enabling an operator to specify a time availability of each resource that can be used to perform each service needed to perform the job;

(c) automatically creating a plurality of proposals that specify when the job might be scheduled during a defined time period, as a function of each service and the time dependency of each service specified and as a function of the time availability of each resource that can be used to perform each service needed to perform the job, each proposal indicating a time instance at which the job can be initiated during the defined time period;

(d) based upon a desired time for starting the job, automatically selecting one of the plurality of proposals that was created, to make an appointment for doing the job; and

(e) automatically revising the plurality of proposals in response to said one of the plurality of proposals being selected, to accommodate changes in the time availability of resources that are required to perform said one of the plurality of proposals that was selected, in regard to proposals that have not yet been selected.

2. (Original) The method of Claim 1, further comprising the step of associating the proposal with a customer for whom the job is to be done.

3. (Original) The method of Claim 1, wherein the step of automatically creating the plurality of proposals comprises the steps of automatically searching each of the services needed to perform the job to identify an availability of each block of time that is:

(a) sufficient in duration to perform the service; and

(b) for which resources required to perform the service are available.

4. (Original) The method of Claim 3, further comprising the step of associating a job identification with each block of time that is thus identified.

5. (Original) The method of Claim 3, further comprising the step of splitting a block of time into pieces, to define a proposal having a split time interval in which the job can be performed.

6. (Original) The method of Claim 1, further comprising the step of assigning different priorities to at least some of the resources, so that a resource assigned a lower priority is used prior to a resource assigned a higher priority, when selecting said one of the plurality of proposals to schedule the appointment.

LAW OFFICES OF RONALD M. ANDERSON
600 - 108th Avenue N.E., Suite 507
Bellevue, Washington 98004
Telephone: (425) 688-8816 Fax: (425) 646-6314

7. (Original) The method of Claim 1, wherein the step of specifying the time availability of each resource includes the step of specifying any block of time in which a resource is unavailable to perform a service during the defined time period.

8. (Original) The method of Claim 1, wherein the step of selecting one of the plurality of proposals comprises the step of balancing usage of the resources that can be used to perform the services needed to perform the job.

9. (Original) The method of Claim 1, wherein a plurality of the services needed to perform the job are carried out sequentially, with a first service being completed before a second service can be begin.

10. (Original) The method of Claim 1, wherein a plurality of the services needed to perform the job are carried out in parallel, with a first service being completed while a second service is also being done.

11. (Original) The method of Claim 1, wherein the step of automatically creating the plurality of proposals is completed substantially before the step of automatically selecting is carried out.

12. (Original) The method of Claim 1, further comprising the step of repeating steps (a) through (b) for each of a plurality of additional jobs, to enable scheduling of appointments to the additional jobs.

13. (Original) The method of Claim 1, further comprising the step of enabling an appointment to be canceled, and in response thereto, automatically revising the plurality of proposals, to accommodate changes in the time availability of resources that were previously required to perform said one of the plurality of proposals corresponding to the appointment that was canceled, making the resources available for other appointments.

14. (Original) A method for automating scheduling of a plurality of jobs, comprising the steps of:

(a) associating a job identification with each of the plurality of jobs;

(b) determining all jobs that can be performed during a defined work period;

(c) for each job that can be performed during the defined work period, automatically determining each time instance in which the job can be performed;

(d) automatically determining each service required to perform each job;

(e) automatically identifying resources that can carry out each service required to perform each job;

(f) for each resource identified that can perform a service required to do each job, automatically determining time blocks in which the resource is available for the time required to perform the service, and associating the time blocks thus determined with the job identification for the job in which the service is required to form a plurality of schedule paths;

LAW OFFICES OF RONALD M. ANDERSON
600 - 108th Avenue N.E., Suite 507
Bellevue, Washington 98004
Telephone: (425) 688-8816 Fax: (425) 646-6314

(g) retaining data specifying all time blocks associated with each job identification, and start times for each job within the time blocks; and

(h) enabling appointments to be made to have desired jobs done, by automatically searching the data to locate specific time criteria for the desired jobs, said data being modified in response to each appointment that is made, to identify time blocks that are no longer available for doing a job.

15. (Original) The method of Claim 14, further comprising the step of ranking the time blocks associated with each job in the data, to achieve one of:

(a) a ranked priority in the use of resources; and

(b) a balancing of the resources that are used for the services required to do the jobs.

16. (Original) The method of Claim 14, further comprising the step of retaining data that include the job identification of a job in which a resource was not available in a time block to perform a service required to do the job and an indication of said service and said time block.

17. (Original) The method of Claim 14, wherein the step of retaining the data is completed substantially before the step of enabling an appointment to be made.

18. (Original) The method of Claim 14, wherein the step of enabling the appointments to be made is carried out by communicating over a network link with a site at which the data are maintained.

19. (Original) The method of Claim 18, wherein the network link comprises an Internet connection between the site where the data are maintained, and client computing devices used to input the specific time criteria, further comprising the step of associating a customer identification with a job identification, for each appointment that is made.

20. (Original) The method of Claim 14, wherein a plurality of services are completed sequentially to do a job, and wherein the step of automatically identifying the time blocks comprises the step of identifying time blocks in which the plurality of services and the resources required for carrying out the plurality of services sequentially are available.

21. (Original) The method of Claim 14, further comprising the step of identifying time blocks in which specific resources are not available, so that said time blocks are therefore not considered in the step of automatically identifying the time blocks.

22. (Original) The method of Claim 14, wherein a specific resource is available to perform only a single task associated with the specific resource, during a time block.

23. (Original) The method of Claim 14, wherein a specific resource is available to perform any task associated with the specific resource, during a time block that is not yet allocated to a job.

LAW OFFICES OF RONALD M. ANDERSON
600 - 108th Avenue N.E., Suite 507
Bellevue, Washington 98004
Telephone: (425) 688-8816 Fax: (425) 646-6314

24. (Original) The method of Claim 14, wherein a job includes a service that can only be done during a specific time block.

25. (Original) The method of Claim 14, wherein a schedule path for a job associates a job identification for said job with the resources that are available at a specific time and are needed to perform the services required to do the job.

26. (Original) The method of Claim 25, wherein schedule paths that include resources having a lower priority are used in making an appointment to do a job before schedule paths that include resources having a higher priority.

27. (Original) The method of Claim 25, further comprising the step of redefining the schedule paths when an appointment is canceled, to use the resources that were in the schedule path associated with the appointment that was canceled to define other schedule paths that are available to be associated with another appointment.

28. (Original) The method of Claim 21, wherein after an appointment is canceled, further comprising the step of again identifying time blocks in which resources are not available, so that said time blocks are therefore not considered in the step of automatically identifying the time blocks that are available to create the schedule paths.

29. (Original) The method of Claim 14, further comprising the step of enabling maintenance to be done on the data, said maintenance comprising at least one of:

(a) adding another job to the plurality of jobs;

(b) deleting an appointment;

(c) inserting a job among the plurality of jobs; and

(d) deleting a job from among the plurality of jobs.

30. (Original) A machine-readable medium having processor-executable instructions for performing the steps recited in Claim 14.

///

///

LAW OFFICES OF RONALD M. ANDERSON
600 - 108th Avenue N.E., Suite 507
Bellevue, Washington 98004
Telephone: (425) 688-8816 Fax: (425) 646-6314

31. (Original) A system for automating scheduling of a plurality of jobs, comprising:

(a) a memory in which data and machine instructions are stored;

(b) a user interface through which a user input is provided;

(c) a display;

(d) a processor that is coupled to the memory, the user interface, and the display, said processor executing the machine instructions stored in the memory to carry out a plurality of functions, including implementing a look-ahead procedure in which:

(i) a job identification is associated with each of the plurality of jobs;

(ii) all jobs that can be performed during a defined work period are determined;

(iii) for each job that can be performed during the defined work period, each time instance in which the job can be performed is determined;

(iv) each service required to perform each job is determined;

(v) resources that can carry out each service required to perform each job are identified;

(vi) for each resource identified that can perform a service required to do each job, time blocks in which the resource is available for the time required to perform the service are determined, and the time blocks thus determined are associated with the job identification for the job in which the service is required to form a plurality of schedule paths; and

(vii) data specifying all time blocks associated with each job identification, and start times for each job within the time blocks are stored as data in the memory; and

(e) said processor subsequently executing the machine instructions stored in the memory to enable appointments to be made to have desired jobs done, by searching the data stored in the memory to locate specific time criteria for the desired jobs, said data being modified in response to each appointment that is made, to identify time blocks that are no longer available for doing a job.

32. (Original) The system of Claim 31, wherein the user interface is employed to indicate a desired job and the specific time criteria for the desired job.

33. (Original) The system of Claim 31, further comprising a network interface that is connected in data communication with the processor, said network interface coupling the processor with a remote site for selection of a desired job and for selection of a specified time criteria to perform the job.

34. (Original) The system of Claim 31, wherein the look-ahead procedure further provided for ranking the time blocks associated with each job in the data, to achieve one of:

(a) a ranked priority in the use of resources; and

(b) a balancing of the resources that are used for the services required to do the jobs.

LAW OFFICES OF RONALD M. ANDERSON
600 - 108th Avenue N.E., Suite 507
Bellevue, Washington 98004
Telephone: (425) 688-8816 Fax: (425) 646-6314

35. (Original) The system of Claim 31, wherein data are stored in memory that include an indication of the job identification of a job in which a resource was not available in a time block to perform a service required to do the job, and an indication of said service and said time block.

36. (Original) The system of Claim 31, wherein the look-ahead procedure is carried out before any appointment is made.

37. (Original) The system of Claim 33, wherein the network interface couples the processor in communication via the Internet to the remote site where the data are maintained, and a customer identification for a user at a remote site is associated with a job identification for each appointment that is made.

38. (Original) The system of Claim 31, wherein a plurality of services are completed sequentially to do a job, and wherein time blocks in which the plurality of services and the resources required for carrying out the plurality of services sequentially are available, are identified by the processor in the look-ahead procedure.

39. (Original) The system of Claim 31, wherein time blocks in which specific resources are not available are identified in the look-ahead procedure, so that said time blocks are excluded when identifying the time blocks used in the plurality of schedule paths.

40. (Original) The system of Claim 31, wherein a specific resource is only available to perform a specific task during a specific time block.

41. (Original) The system of Claim 31, wherein a specific resource is available to perform any task associated with the specific resource during a time block.

42. (Original) The system of Claim 31, wherein a job includes a plurality of services that are able to be performed concurrently during at least a portion of a time block.

43. (Original) The system of Claim 31, wherein a schedule path for a job associates a job identification for said job with the resources that are available at a specific time and are needed to perform the services required to do the job.

44. (Original) The system of Claim 31, wherein resources have different priorities, and wherein schedule paths that include resources having a lower priority are used in making an appointment to do a job before schedule paths that include resources having a higher priority.

45. (Original) The system of Claim 31, the machine instructions cause the processor to redefine the schedule paths when an appointment is canceled, so that the resources that were in the schedule path associated with the appointment that was canceled are then used to define other schedule paths that can be employed in another appointment.

46. (Original) The system of Claim 31, wherein after an appointment is canceled, time blocks in which resources are not available are again identified by the processor, so that said time blocks are therefore excluded when the processor identifies the time blocks that are available to create the schedule paths.

LAW OFFICES OF RONALD M. ANDERSON
600 - 108th Avenue N.E., Suite 507
Bellevue, Washington 98004
Telephone: (425) 688-8816 Fax: (425) 646-6314

47. (Original) The system of Claim 31, wherein the machine instructions also cause the processor to enable maintenance to be done on the data stored in the memory, said maintenance comprising at least one of:

(a) adding another job to the plurality of jobs;

(b) deleting an appointment;

(c) inserting a job among the plurality of jobs; and

(d) deleting a job from among the plurality of jobs.

LAW OFFICES OF RONALD M. ANDERSON
600 - 108th Avenue N.E., Suite 507
Bellevue, Washington 98004
Telephone: (425) 688-8816 Fax: (425) 646-6314